

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Appln. No. 09/688,867

REMARKS

Claims 1-14 are all the claims pending in the application. Claims 8-14 are withdrawn from consideration. Claims 15 and 16 are added, as indicated herein, to round out the scope of protection solicited for the present invention. Applicant thanks the Examiner for indicating that claim 5 would be allowable if rewritten *in extenso*. Claims 1-7 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Claims 1 and 7 are rejected under 35 U.S.C. § 102(b) as allegedly being fully anticipated by Ohuchi et al. (U.S. Patent No. 3,842,493), hereinafter referred to as Ohuchi. Claims 2, 3, and 6 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ohuchi in view of Carpenter et al. (U.S. Patent No. 2,845,555), hereinafter referred to as Carpenter.

§ 112 Rejections – Claims 1-7

Claims 1-7 are rejected under § 112 for the reasons set forth in the Office Action. *See Office Action, pages 2-3.* Applicant amends claims 1 and 7, as indicated herein, and submits that claims 1-7 are now in condition for allowance.

§ 102 Rejections (Ohuchi) – Claims 1 and 7

Claims 1 and 7 are rejected under 35 U.S.C. § 102(b) as allegedly being fully anticipated by Ohuchi. Applicant amends claim 1, as indicated in the attached Appendix, and submits that Ohuchi does not teach or suggest at least “said cylindrical core proximal portion having a substantially smooth surface located opposite a plurality of teeth.” More particularly, Ohuchi only discloses steel strips having notches or indentations in the portion of the steel strip 1

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corresponding to the cylindrical core proximal portion of Applicant's invention. *See Fig. 1 of Ohuchi, for example.*

Further, with respect to claim 1, the fundamental structure of the iron core, as recited in claim 1, is quite different from the iron core of Ohuchi. Claim 1 describes that a substantially hexahedral laminate is made by laminating a plurality of magnetic plate strips. This substantially hexahedral laminate is curved like a cylinder, and both end portions of this substantially hexahedral laminate are abutted and joined. *See claim 1 for specific recitations.* On the other hand, in Ohuchi, as shown in Fig. 1, one very long belt-shaped magnetic plate sheet is continuously wound around in a spiral shape. Therefore, for at least the above-stated reasons, claim 1 is patentable over Ohuchi.

Applicant submits that claim 7 is patentable at least by virtue of its dependency from claim 1.

§ 103 Rejections (Ohuchi / Carpenter) – Claims 2, 3, and 6

To support the § 103 rejections, the Examiner states that Ohuchi discloses the claimed invention, except for the added limitations of both end portions of the core proximal portion having lower rigidity than that of the remainder thereof. *See Office Action, numbered paragraph 4.* The Examiner, however, alleges that Carpenter makes up for the deficiencies of Ohuchi.

With respect to independent claim 2, first, Applicant submits that claim 2 is patentable at least for reasons similar to those set forth above for claim 1. More particularly, Ohuchi does not teach or suggest that a substantially hexahedral laminate is made by laminating a plurality of

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magnetic plate strips, and that this substantially hexahedral laminate is curved like a cylinder, and both end portions of this substantially hexahedral laminate are abutted and joined, as recited in claim 2.

Further, with respect to claim 2, Applicant submits that neither Ohuchi nor Carpenter, either alone or in combination, teaches or suggests the limitation "wherein both end portions of the core proximal portion [15a] of the laminate have a lower rigidity than that of the remainder thereof," as recited in claim 2. The end portions of the core proximal portion 15a, as described in claim 2, abut against each other at joining portion 16 of laminate 15. The end portions are then welded to each other by, for example, laser welding. *See Fig. 1C and page 13, third full paragraph of present disclosure.* On the other hand, Carpenter does not teach or suggest these aspects of claim 2. Carpenter shows a tapering of the toothed strip ST at a point from the roots of the teeth 31 to the periphery. *See Figs. 1 and 2.* That is, the toothed strip ST of Carpenter is uniformly tapered along the entire toothed strip ST at an end extending from the roots of the teeth to a line near the periphery. *See col. 3, lines 14-31.* Applicant's invention, as recited in claim 2, recites that end portions of the core proximal portion of the laminate have a lower rigidity than that of the remainder thereof. Therefore, claim 2 describes a toothed strip, or laminated magnetic plate strip, that is not uniformly tapered therealong, but is tapered only at end portions having a lower rigidity than that of the rest of the toothed strip; the end portions being located at a part of the toothed strip where it is joined.


Applicant further submits that claims 3 and 6 are patentable at least by virtue of their dependency.

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Finally, Applicant adds new claims 15 and 16, as indicated herein, to round out the scope of protection solicited for the present invention. New claim 15 distinguishably defines the locations of the end portions described in claim 2 over the applied references. Claim 16 is patentable at least for reasons similar to those set forth above for claims 1 and 2; that is, the fundamental structure of the iron core, as defined by claim 16, is quite different from the iron core of Ohuchi.

Applicant hereby petitions for any extension of time which may be required to maintain the pendency of this case, and any required fee, except for the Issue Fee, for such extension is to be charged to Deposit Account No. 19-4880.

Respectfully submitted,



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APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

The claims are amended as follows:

1. (Amended) An iron core of a rotating-electric machine, comprising:

laminated magnetic plate strips, each of said strips connected to each other to form a substantially hexahedral laminate and, after being formed into said iron core, said substantially hexahedral laminate has a cylindrical core proximal portion, said cylindrical core proximal portion having a substantially smooth surface located opposite a plurality of teeth;

~~a cylindrical core proximal portion;~~

~~a the plurality of teeth projecting in a substantially radial direction from the cylindrical core proximal portion; and~~

slots for accommodating a winding that are located between the teeth adjacent to each other,

~~wherein the iron core is fabricated by curving both end portions of a the substantially hexahedral laminate are joined and curved so that the cylindrical core proximal portion obtains a predetermined curvature, forming the entire substantially hexahedral laminate is formed into a cylindrical shape, by wrapping it around a cylindrical core member so that and~~

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distal ends of the teeth project from the cylindrical core proximal portion, ~~and joining both end portions.~~

2. (Amended) An iron core of a rotating-electric machine, comprising:

laminated magnetic plate strips, each of said strips connected to each other to form a substantially hexahedral laminate and, after being formed into said iron core, said substantially hexahedral laminate having a cylindrical core proximal portion;

a plurality of teeth projecting in a substantially radial direction from the proximal portion; and

slots for accommodating a winding that are located between the teeth adjacent to each other,

wherein both end portions of the substantially hexahedral laminate are joined and curved so that the cylindrical core proximal portion obtains a predetermined curvature, the entire substantially hexahedral laminate is formed into a cylindrical shape, and distal ends of the teeth project from the cylindrical core proximal portion ~~An iron core of a rotating electric machine according to Claim 1, and~~

wherein said both end portions of the cylindrical core proximal portion of the laminate have a lower rigidity than that of the remainder thereof.

7. (Amended) ~~An~~ The iron core of a rotating-electric machine according to ~~Claim-claim~~ 1, wherein the iron core is formed ~~by curving of~~ a single substantially hexahedral laminate.

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Claims 15 and 16 are added as new claims.